

Marine Angler Expenditures in the Pacific Coast Region, 2000

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U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service

NOAA Technical Memorandum NMFS-F/SPO-49
October 2001

ACKNOWLEDGMENTS

The authors thank the Marine Recreational Fisheries Statistics Survey team of the Fisheries Statistics and Economics Division, National Marine Fisheries Service for assistance in producing this document. In particular, we wish to extend our appreciation to Dr. Dave Van Voorhees who provided invaluable advice and assistance on the statistical methodologies employed for this research. We also thank Alan Lowther and Maury Osborn for their help in explaining the nuances of the survey. Also we would like to thank Dr. Amy Gautam for her editorial assistance. Finally we would like to thank Charles Gardner for the photograph used on the cover.

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In 2000, a recreational fishing expenditure survey was conducted in the Pacific Coast region as an add-on to the National Marine Fisheries Service's Marine Recreational Fisheries Statistics Survey (MRFSS). This report summarizes the results of the expenditure survey, and provides state-level estimates of direct sales resulting from anglers' expenditures in 2000.

Executive Summary

Anglers' daily trip expenditures are reported for each state and fishing mode by resident type (i.e., state resident or non-resident). Expenditures on fishing equipment and other semi-durable and durable items used primarily for saltwater recreational fishing are provided at the state-level. Sample descriptive statistics (means, weighted means, and standard errors) are presented by state for all expenditure estimates and confidence intervals calculated for the total expenditure statistics. Total resident expenditures were considerably larger than that of non-residents. Across all Pacific Coast states, recreational anglers spent between \$574 million and \$2.5 billion on marine recreational fishing in 2000, with Southern California anglers spending the most. Across all Pacific Coast states, recreational fishing expenditures in 2000 totaled \$4.5 billion. Nationwide, recreational fishing expenditures total \$21 billion.

Introduction

Over 2.2 million saltwater anglers fished 8.5 million days in the Pacific Coast region of the U.S. (California through Washington) in 2000 (NMFS 2001).

In addition to the leisure benefits these anglers received from participating in saltwater fishing, their expenditures generated monetary benefits in the form of sales, income, and employment throughout the Pacific Coast. A variety of goods and services were purchased from sporting goods stores, specialty stores, bait and tackle shops, guide services, marinas, grocery stores, automobile service stations, and restaurants. The economic impacts of these purchases rippled throughout the Pacific Coast's economy and provided income and jobs in manufacturing, transportation industries, and service sectors.

With the passage of the Sustainable Fisheries Act (P.L. 104-297) in 1996, which amended the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA), Congress mandated the analysis of economic impacts of management policies on fishing participants and coastal communities. A similar appraisal is also required under the National Environmental Policy Act (NEPA) and Executive Order 12866. As a result, in 2000 the National Marine Fisheries Service (NMFS) conducted an economic expenditure survey on the Pacific Coast (PC) of the United States to evaluate recreational fishing expenditures and the economic impacts generated from

these expenditures in this region. The expenditure survey was

conducted as part of the 2000 Marine Recreational Fishery Statistics Survey (MRFSS) in the PC and was a follow-up to a comprehensive PC marine recreational economic survey conducted in 1998 (Gentner and Lowther, forthcoming).

The purpose of this report is to summarize the results of the 2000 economic expenditure survey and to provide state-level estimates of direct sales resulting from anglers' expenditures in the PC in 2000. Summary statistics presented in this document will be used in the future to assess total sales, income, and employment generated from angler expenditures.

The report begins with a brief description of the base MRFSS and the economic data collection methods used to date. Survey response rates are then discussed followed by a review of the procedures used to estimate expenditures. Sample statistics (means, weighted means, and standard errors) are provided by state for all expenditure estimates and confidence intervals are shown for the total expenditure statistics. Two previous publications, Steinback and Gentner (2001) and Gentner, Price and Steinback (2001), estimated these same expenditures for the Northeast and Southeast United States respectively. Because this is the last publi-

cation in this series, this report also presents the total expenditure estimates across the entire United States. The report concludes with a review of major findings and a discussion of future research.

The Marine Recreational Fisheries Statistics Survey

The Base Surveys

Since 1979, the MRFSS has collected data to estimate the total bi-monthly fishing effort (number of days fished), participation, and finfish catch by marine recreational anglers on the Pacific Coast. The MRFSS consists of two independent yet complementary surveys: an intercept survey of marine anglers at fishing access sites and a random digit dial (RDD) telephone survey of coastal county households.

The intercept survey was designed to provide a random sample of all marine recreational fishing trips. Data from the intercept survey are primarily used to estimate mean catch-per-trip by species. Participation and effort are estimated using data acquired through the RDD survey of coastal households. Coastal county households are sampled randomly using the random digit dialing technique described by Groves et al. (1988).

All anglers in a contacted household are identified, and each is asked about his fishing activity during the previous two-month period. The RDD survey

therefore provides data to estimate effort and participation by coastal residents living in households with telephones. Ratios from the intercept survey are used to correct these effort estimates to account for non-coastal residents and coastal residents who do not have telephones, as those groups are not covered in the household sampling frame. Readers unfamiliar with the MRFSS sampling procedures are encouraged to review Gray et. al (1999) for further details.

Expenditure Surveys

To take advantage of sampling, survey design, and quality control procedures already in place, the economic survey was designed as an add-on to the MRFSS. The economic expenditure survey involved three phases. The first phase added a series of questions to the MRFSS intercept survey, linking basic economic information to trip-specific catch information and behavior. Intercepted anglers were then asked to participate in the second phase of the survey, the telephone follow-up. The telephone follow-up solicited detailed expenditure data. The third phase added several of the expenditure questions asked on the follow-up survey to the RDD survey of coastal household residents.

The intercept survey collected information from day-trip anglers only (Appendix 1). It was felt that multi-day (overnight) anglers would not be able to adequately calculate trip expenditures if they were intercepted mid-trip.

Day-trip anglers were asked detailed questions regarding their expenditures for the current trip, including items such as food, refreshments, lodging, travel costs, boat fuel, charter fees, access or boat launching fees, equipment rental, bait, and ice. All anglers were then asked if they would like to participate in a follow-up survey and, if so, their phone number was collected.

The telephone follow-up survey collected detailed expenditure data from both day-trip and overnight anglers (Appendix 2). Information collected from overnight anglers included: number of days away from residence, number of days spent fishing, whether or not the primary purpose of the trip was for fishing, and the same trip expenditure categories the day trip anglers were asked on the intercept survey. All anglers were then asked about other expenditure categories including fishing equipment and semi-durable items (rods, reels, lines, tackle, magazines, club dues, special fishing clothing, camping gear, binoculars, and taxidermy), and durable goods (motor boats and accessories, non-motorized boats, boating electronics, mooring, boat storage, boat insurance and vehicles or second homes used primarily for marine angling).

The RDD add-on survey was designed so that expenditure responses from a random sample of households could be compared to responses from a random sample of trips (i.e., to both the inter-

cept and telephone follow-up surveys). As such, it collects a similar set of expenditure elements (Appendix 3).

Response Rates

A total of 37,078 economic intercepts were attempted and 34,668 (94%) were completed. Approximately 47% (17,341) of the respondents that completed the economic intercept survey agreed to participate in the economic follow-up survey. However, only 12,683 of these anglers (73%) completed the entire economic follow-up questionnaire. Anglers that could not be reached in six calls comprised the majority of the non-respondents, followed by wrong numbers and a small number of refusals. For the RDD survey, a total of 73,708 households were contacted; 2,464 of these were identified as saltwater fishing households. Of the fishing households, 1,900 (77%) successfully completed the RDD survey.

Average Expenditures

Average daily trip expenditures were estimated for each state and fishing mode (party/charter boat; private/rental boat; and shore) by resident type (resident or non-resident). Anglers reported making two types of trips: day trips and multi-day (overnight) trips. Overnight anglers were asked to report trip length, number of days fished, and total trip cost.

For overnight anglers, average daily costs for expenditures directly related to fishing, such as boat fuel, guide or package fees, access and/or boat launching fees, equipment rental (boat, fishing or camping equipment), bait, ice, and public transportation were calculated by dividing the total amount spent by the number of days fished. For expenditures not directly associated with fishing (e.g., food/drink/refreshments and lodging at motels/cabins/lodges/campgrounds, etc.), average daily costs were derived by dividing total expenses on multi-day (overnight) trips by the length of these trips. This approach for estimating indirect average costs per day assumes constant daily food, beverage, and lodging expenditures for anglers on overnight trips.

Additional procedures were required to estimate private transportation costs. Round-trip mileage traveled in each state where fishing trips occurred was estimated using PCMILER software (ALK Associates, Inc. 1995) and

multiplied by 12.2 cents per mile (American Automobile Association estimate of the average per mile variable cost of operating a car in 2000) to calculate state-level private travel expenses.¹ For overnight trips, daily expense estimates were determined by dividing total in-state expenses by the number of days fished on the trip. Finally, since anglers identified how many people shared trip expenses, each angler's total daily transportation expense was divided by the average number of contributors, by state and mode.

Apart from trip-related expenditures, anglers also purchase fishing equipment and other durable items used primarily for saltwater recreational fishing. Annual estimates of average angler expenditures for fishing equipment, semi-durable, and durable items were calculated with data collected from the telephone follow-up survey.

Sample Variability

The RDD survey incorporates uniform selection probabilities with respect to contacting individuals. That is, avid anglers were just as likely to be interviewed as those that fished less frequently. In contrast, the probability of selection for the intercept survey was uniform across fishing trips, but higher for participants who fished more frequently. As a result, avid anglers were disproportionately represented in the intercept sample. This avidity bias does not affect the estimation of anglers' daily trip expenditures since the

selection probability was uniform across fishing trips. However, the bias may affect the annual expenditure estimates to the extent they are correlated with avidity.

Linear regression analysis of a similar data set for the Northeast Region (Maine through Virginia) indicated a positive relationship between expenditures and avidity (Steinback and Gentner, 2001). This relationship held for almost all categories of annual expenditures. This suggests that more avid anglers spend more money on annual fishing expenses.

In two previous studies of similar data in the Northeast (Steinback and Gentner, 2001) and Southeast (Gentner, Price, and Steinback 2001) regions, one-way analyses of variance (ANOVA) tests revealed that intercepted anglers fished significantly more days per year, on average, than those contacted randomly over the phone for the RDD survey.

In addition, average expenditures on durable goods, semi-durable goods, and fishing equipment were compared between the two surveys. In almost all cases, average expenditures estimated from the intercepted respondents were significantly higher ($P < 0.05$) than the estimates obtained from the RDD survey. The ANOVA results were not surprising considering the sample selection differences between the intercept and RDD surveys. Because of the positive relationship between avidity and expenditures found in

previous surveys, it is assumed that the intercepted responses on the Pacific Coast are also upwardly biased. To correct for the avidity bias, weighted means were calculated as described below.

Procedure to Correct for Avidity Bias

Using a procedure adapted from Thomson (1991), estimates of means were computed as follows:

$$(1) \quad \hat{R} = \frac{\sum_s \frac{Y_k}{X_k}}{\sum_s \frac{1}{X_k}},$$

where \hat{R} is the weighted mean (the “hat” notation denotes estimated quantities); Y_k is the expenditure of angler k ; X_k is the avidity of angler k ; and s represents the population sample. Equation (1) corrects for the unequal selection probabilities of intercepted anglers due to the avidity bias and produces consistent estimates of mean expenditures with relatively high precision.² The associated variance, $\hat{V}(\hat{R})$, developed by Thomson (1991), was estimated by

$$(2) \quad \hat{V}(\hat{R}) = \left[\frac{\sum_s \frac{Y_k}{X_k}}{\sum_s \frac{1}{X_k}} \right]^2 \left[\frac{1}{m} \left[\frac{S_{\frac{Y}{X}}^2}{\hat{R}^2} + \frac{S_{\frac{1}{X}}^2}{1} - \frac{2S\left(\frac{Y}{X}\right)\left(\frac{1}{X}\right)}{\hat{R}} \right] \right];$$

where

$$S_{\frac{Y}{X}}^2 = \frac{1}{m-1} \left[\sum_s \left(\frac{Y_k}{X_k} \right)^2 - m \left(\overline{\frac{Y_k}{X_k}} \right)^2 \right],$$

$$S_{\frac{1}{X}}^2 = \frac{1}{m-1} \left[\sum_s \left(\frac{1}{X_k} \right)^2 - m \left(\overline{\frac{1}{X_k}} \right)^2 \right],$$

and

$$S_{\left(\frac{Y}{X}\right)\left(\frac{1}{X}\right)} = \frac{1}{m-1} \left[\sum_s \frac{Y_k}{X_k^2} - m \overline{\frac{Y_k}{X_k}} \overline{\frac{1}{X_k}} \right].$$

m is the number of observations in the sample, $\frac{Y_k}{X_k}$ is the sample mean of Y_k times the inverse of X_k , and $\overline{\frac{1}{X_k}}$ is the sample mean of the inverse of avidity for each angler k .

Angler expenditure estimates were further adjusted using other information, where possible. Boat related expenditures (boat purchases, boat maintenance, and boat accessories) were weighted by the percent of time the boat in question was used for saltwater recreational angling. For equipment expenditures (rods/reels, other tackle, and gear), anglers were asked to estimate the proportion of trip and equipment expenditures spent in the intercept state. This

proportion was used to adjust the expenditure estimates from the intercept survey prior to calculating weighted means for the equipment expenditures. Because non-resident anglers were not asked the proportion of annual expenditures made in the PC state of intercept, non-resident expenditures were not estimated for any of the annual expenditure categories.

Total Expenditures

Arithmetic mean daily trip expenditures were multiplied by MRFSS estimates of total fishing effort (i.e., days fished in 2000; Table 1) to derive total expense estimates. Estimates were calculated by state, mode, and resident status. The variances of the

Table 1. Estimated Number of Days Fished by State, Mode, and Resident Status, 2000.¹

State	Mode ²	Resident	Non-Resident	Total
Southern California	pc	840,443	115,813	956,256
	pr	1,685,297	69,205	1,754,502
	sh	1,040,109	31,390	1,071,500
	Total	3,565,849	216,408	3,782,257
Northern California	pc	198,267	39,429	237,696
	pr	963,959	30,961	994,920
	sh	912,402	21,987	934,389
	Total	2,074,628	92,377	2,167,005
California (all)	pc	1,038,710	155,242	1,193,952
	pr	2,649,256	100,165	2,749,421
	sh	1,952,511	53,378	2,005,889
	Total	5,640,477	308,785	5,949,262
Oregon	pc	67,677	32,544	100,221
	pr	518,355	70,498	588,853
	sh	189,790	22,454	212,244
	Total	775,822	125,496	901,318
Washington	pc	30,925	2,905	33,830
	pr	1,092,660	35,993	1,128,653
	sh	428,241	37,714	465,955
	Total	1,551,826	76,612	1,628,439

¹Estimates will vary slightly from NMFS (2001) due to rounding.

²pc = party/charter; pr = private/rental; sh = shore

total expenditure estimates were calculated according to Gray (1999) as follows:

(3)

$$\hat{V}(\hat{T}\hat{R}) = \hat{T}^2\hat{V}(\hat{R}) + \hat{V}(\hat{T})\hat{R}^2 - \hat{V}(\hat{T})\hat{V}(\hat{R}),$$

where \hat{T} is the estimate of angler effort and \hat{R} is the arithmetic expenditure mean of the sample. Goodman (1960) showed that Equation (3) produces an unbiased variance estimate when \hat{R} and \hat{T} are independent random variables. Because trip-related items were collected randomly and estimates of R and T were calculated from different surveys, the variables were

resident status (Table 2)³. The resultant variance was calculated by substituting the MRFSS estimates of participation and variance in each strata for \hat{T} and $\hat{V}(\hat{T})$ in equation (3), and the weighted mean expenditures and variances estimated from equations (1) and (2) for \hat{R} and $\hat{V}(\hat{R})$. Standard errors were calculated from the resulting variance estimates for each expenditure item and confidence intervals were generated at the 95% level.

Table 2. Total Estimated Number of Participants by State and Resident

State	Resident	Non-Resident	Total
Southern California	1,097,232	168,823	1,266,055
Northern California	387,927	51,221	439,148
California (all)	1,485,159	220,044	1,705,203
Oregon	285,606	79,810	365,417
Washington	449,912	46,547	496,459

³These participation estimates are not additive across states. A participant could have fished in more than one state. See NMFS (2001) for total Pacific Coast region participation estimates.

considered to be random and independent. Standard errors, derived from equation (3), were used to generate confidence intervals for trip-related expenditures at the 95 percent level.

Total estimated annual expenditures were calculated by multiplying the weighted mean expenditures per participant by MRFSS estimates of total fishing participation by state and

Average Expenditures

Summary statistics (arithmetic means or weighted means, and standard errors) by state are presented for two nonexclusive groups of anglers: all respondents and spenders (Tables 3, 5, 8 and 10). The ‘spenders’ estimates include only responses of individuals who reported an expense, while both spenders and non-spenders are included in the ‘all’ category. Statistics are reported by state, resident category, and mode for the daily trip expenditures and only by state for the annual expenditures by residents.

Average daily trip expenditures for non-residents were generally higher than for residents in all of the coastal states in the PC. Non-residents tended to travel further within the fishing state and tended to make multi-day trips that required overnight lodging. In Southern California, for example, non-residents fishing from party or charter boats spent \$65.62, on average, for private transportation and \$59.55 for lodging (Table 3). Expenditures by resident anglers fishing aboard party or charter boats, on the other hand, averaged \$9.78 for private transportation and \$1.18 for lodging.⁴

Overall, non-residents tended to spend more than their resident counterparts for most purchases. This anomaly is not easily explained. Non-resident anglers may lack the time or local knowledge that residents have to compare prices for trip items such as charter guide fees, equipment rental, food, bait, and ice. Non-residents may also be less experienced and may simply overspend to ensure they will have adequate supplies for the trip. The largest daily trip expenditures across most of the states were for food/drink/refreshments, private transportation, boat fuel, lodging, and charter guide fees.

For the annual expenditure items, estimates could only be generated for residents of Pacific coastal states. Residents’ highest annual expenditures by far were for boat purchases, boat accessories, boat maintenance, and fishing vehicle purchases. In addition, average durable expenditures by resident ‘spenders’ were substantially higher than estimates generated from all residents. In Southern California, for example, the average weighted annual boat expense for spenders was \$5,365.14 and only \$465.55 across all anglers (Table 3).

Total Expenditures

Total expenses and 95 percent confidence intervals are shown for all expenditure items by state and residence strata (Tables 4, 6, 7, 9, 11, 12, and 13). The precision of the expenditure estimates can be evaluated by examining the difference between the estimate and the upper and lower bounds.

Total resident trip-related expenditures within the private/rental modes exceed non-residents' expenditures across all states because of higher participation than non-residents. For example, in Southern California even though non-residents' average expenditures in the private/rental mode were almost six times the average expenditures of residents, total expenditures of residents in the same mode were more than four times higher than non-residents. Total resident trip-related expenditures within the shore mode exceed non-residents' expenditures across all states. Total resident trip expenditures within the charter mode exceed non-resident expenditures across all states.

In total, resident and non-resident anglers in Southern California exhibited the highest recreational fishing expenditures in the PC region. Anglers fishing in California spent \$2.5 billion on marine recreational fishing in 2000 (Table 7). Across all PC states, total recreational fishing expenditures totaled \$4.5 billion (Table 12).

Table 3. Southern California Average Expenditures by Mode and Resident Status, 2000.

SOUTHERN CALIFORNIA		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party/Charter	9.78	0.22	9.78	0.22	65.62	1.91	65.62	1.91
	Private/Rental	7.07	0.16	7.07	0.16	74.87	6.68	74.87	6.68
	Shore	6.49	0.29	6.49	0.29	73.94	8.10	73.94	8.10
Food	Party/Charter	12.62	0.35	13.69	0.37	38.01	2.23	39.07	2.25
	Private/Rental	7.54	0.20	8.93	0.22	17.53	2.12	17.99	2.13
	Shore	5.57	0.36	8.02	0.48	21.85	5.25	23.67	5.36
Lodging	Party/Charter	1.18	0.30	72.42	12.68	59.55	5.81	92.30	7.48
	Private/Rental	0.52	0.21	92.14	29.11	23.33	7.43	63.76	15.71
	Shore	2.76	0.70	56.81	11.00	41.45	14.07	87.50	20.88
Public Transportation	Party/Charter	0.51	0.32	90.22	50.01	253.90	28.48	447.92	41.32
	Private/Rental	0.03	0.01	6.85	2.42	61.43	23.49	228.98	66.25
	Shore	0.16	0.08	9.98	3.98	16.07	15.60	85.69	82.16
Boat Fuel	Private/Rental	12.88	0.34	14.29	0.36	21.97	3.48	26.09	3.70
Party/Charter Fees	Party/Charter	55.43	1.99	56.47	2.02	37.40	3.59	44.12	4.01
Access/Boat Launching	Party/Charter	0.96	0.12	3.28	0.39	2.95	0.73	10.41	2.28
	Private/Rental	1.54	0.05	3.52	0.09	2.37	0.64	5.77	1.09
	Shore	0.93	0.07	2.75	0.14	5.29	3.72	14.10	9.28
Equipment Rental	Party/Charter	1.81	0.24	12.90	1.51	34.97	4.84	60.46	7.46
	Private/Rental	0.72	0.08	16.64	1.05	7.71	2.69	35.14	6.64
	Shore	0.14	0.08	16.97	7.36	0.94	0.54	5.03	1.18
Bait & Ice	Party/Charter	0.27	0.03	3.66	0.34	2.32	0.46	8.33	1.34
	Private/Rental	6.87	0.14	8.75	0.15	11.02	1.42	13.35	1.42
	Shore	2.64	0.71	4.64	1.25	6.21	1.59	6.63	1.65
Total	Party/Charter	82.56	2.10	188.19	14.28	494.71	29.84	372.93	13.42
	Private/Rental	37.16	0.50	158.19	29.23	220.22	26.03	305.09	27.06
	Shore	18.70	1.11	105.67	13.89	165.75	23.47	214.41	24.95
Annual Expenditures		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		55.01	4.16	371.91	33.20				
Other Tackle		38.83	3.15	85.55	2.55				
Gear		7.77	0.80	127.37	10.17				
Camping Equipment		3.67	0.87	182.55	20.57				
Binoculars		1.17	0.20	91.33	17.77				
Clothing		3.74	0.59	106.15	7.73				
Magazines		2.06	0.25	43.77	4.42				
Club Dues		1.46	0.26	88.72	15.45				
License Fees		20.16	1.10	38.25	0.82				
Boat Accessories		159.79	37.50	1,294.99	275.84				
Boat Purchase		465.55	53.14	5,365.14	210.76				
Boat Maintenance		111.08	8.95	620.18	25.53				
Fishing Vehicle		359.26	84.50	9,213.82	738.00				
Fishing Vehicle Maintenance		85.04	13.13	1,071.80	43.80				
Vacation Home		4.33	2.45	958.94	414.53				
Vacation Home Maintenance		2.64	1.35	2.64	1.35				
Total		1,321.54	107.99	19,663.13	917.52				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk, only one observation was available.



Southern California

Table 4. Southern California Total Expenditures by Resident Status, 2000 (in thousands of dollars).

SOUTHERN CALIFORNIA		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party/Charter	8,217	9,066	7,369	7,599	8,828	6,371
	Private/Rental	11,914	14,503	9,326	5,181	7,039	3,324
	Shore	6,754	8,531	4,977	2,321	3,270	1,371
Food	Party/Charter	10,605	11,750	9,459	4,402	5,239	3,565
	Private/Rental	12,712	15,499	9,926	1,213	1,688	0
	Shore	5,789	7,362	4,216	686	1,049	323
Lodging	Party/Charter	995	1,499	491	6,897	8,576	5,217
	Private/Rental	875	1,599	150	1,614	2,731	498
	Shore	2,873	4,148	0	1,301	2,146	0
Public Transportation	Party/Charter	429	952	0	29,405	37,238	21,572
	Private/Rental	46	90	0	4,251	7,668	835
	Shore	162	282	0	504	1,295	0
Boat Fuel	Private/Rental	21,700	26,453	16,948	1,520	2,188	0
Party/Charter Fees	Party/Charter	46,587	52,021	41,152	4,332	5,377	3,287
Access/Boat Launching	Party/Charter	806	1,018	593	342	515	0
	Private/Rental	2,595	3,175	2,016	164	263	0
	Shore	969	1,235	702	166	359	0
Equipment Rental	Party/Charter	1,525	1,943	0	4,050	5,304	2,795
	Private/Rental	1,213	1,593	0	534	931	137
	Shore	150	278	21	30	58	1
Bait & Ice	Party/Charter	225	284	165	268	380	156
	Private/Rental	11,570	14,078	9,062	762	1,069	456
	Shore	2,750	4,028	1,471	195	302	88
Total	Party/Charter	69,388	71,056	63,703	57,294	65,606	48,982
	Private/Rental	62,627	69,286	55,967	15,241	19,401	11,081
	Shore	19,446	22,445	16,447	5,203	6,759	3,646
Annual Expenditures		Residents			Non-Residents		
Rods and Reels		60,356	72,143	48,568			
Other Tackle		42,602	51,266	33,937			
Gear		8,531	10,562	6,499			
Camping Equipment		4,030	5,961	2,100			
Binoculars		1,281	1,744	817			
Clothing		4,105	5,468	2,743			
Magazines		2,257	2,863	1,651			
Club Dues		1,597	2,188	1,005			
License Fees		22,124	25,804	18,444			
Boat Accessories		180,526	264,226	96,827			
Boat Purchase		525,965	658,229	393,700			
Boat Maintenance		125,489	150,487	100,492			
Fishing Vehicle		405,881	594,451	217,311			
Fishing Vehicle Maintenance		96,070	126,785	65,356			
Vacation Home		4,891	10,194	0			
Vacation Home Maintenance		2,978	5,898	57			
All Sub-Totals		1,640,143	1,889,056	1,391,171	77,737	87,162	68,313
State Total		1,717,880	1,966,971	1,468,730			

Table 5. Northern California Average Expenditures by Mode and Resident Status, 2000.

NORTHERN CALIFORNIA		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party/Charter	20.45	1.03	20.45	1.03	72.00	5.87	72.00	5.87
	Private/Rental	13.53	0.39	13.53	0.39	64.24	5.19	64.24	5.19
	Shore	18.50	1.07	18.50	1.07	66.19	13.05	66.19	13.05
Food	Party/Charter	16.49	1.31	18.30	1.39	22.86	2.90	23.63	2.89
	Private/Rental	8.96	0.38	10.80	0.43	23.38	3.09	25.32	3.19
	Shore	13.00	1.10	17.42	1.35	29.27	7.59	29.27	7.59
Lodging	Party/Charter	8.58	1.88	69.63	10.47	45.04	9.24	71.65	11.37
	Private/Rental	3.66	0.47	31.93	3.26	10.21	3.04	32.43	7.24
	Shore	9.90	2.00	37.57	6.73	30.41	14.88	43.93	20.14
Public Transportation	Party/Charter	1.83	1.07	37.40	19.46	114.98	37.24	365.84	76.33
	Private/Rental	0.13	0.07	19.41	7.98	2.97	2.33	78.75	38.75
	Shore	0.77	0.24	15.96	3.04	36.92	25.40	240.00	40.00
Boat Fuel	Private/Rental	9.71	0.30	10.49	0.31	11.94	1.59	13.50	1.66
Party/Charter Fees	Party/Charter	56.11	2.05	58.42	1.97	51.62	5.73	51.62	5.73
Access/Boat Launching	Party/Charter	0.84	0.19	4.50	0.78	1.24	0.74	10.88	4.42
	Private/Rental	1.22	0.10	4.22	0.28	3.02	0.74	7.61	1.35
	Shore	0.96	0.21	4.32	0.81	0.15	*	1.90	*
Equipment Rental	Party/Charter	5.13	1.22	36.07	5.99	18.76	13.33	82.08	55.09
	Private/Rental	0.67	0.16	23.90	3.73	1.37	1.05	36.42	15.58
	Shore	1.45	0.39	15.17	3.09	4.62	3.32	30.00	10.00
Bait & Ice	Party/Charter	2.60	0.51	10.19	1.58	1.22	0.42	4.75	0.90
	Private/Rental	6.03	0.16	6.94	0.16	8.33	1.16	9.20	1.21
	Shore	3.89	0.23	5.02	0.25	6.24	1.69	7.38	1.80
Total	Party/Charter	112.03	3.67	236.89	14.86	327.73	41.55	367.18	62.52
	Private/Rental	43.90	0.82	121.22	9.42	125.47	7.52	228.73	18.39
	Shore	48.48	2.58	113.98	8.23	173.80	33.30	178.67	27.15
Annual Expenditures		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		69.66	6.17	278.24	17.81				
Other Tackle		49.26	3.55	109.45	23.41				
Gear		14.49	1.62	96.13	1.29				
Camping Equipment		7.89	2.41	188.55	26.74				
Binoculars		1.76	0.41	95.55	25.17				
Clothing		13.34	2.94	144.82	17.92				
Magazines		2.09	0.37	41.83	7.83				
Club Dues		2.08	0.59	79.78	14.32				
License Fees		33.96	1.23	43.16	1.50				
Boat Accessories		125.52	27.04	888.26	138.51				
Boat Purchase		407.72	66.97	4,338.97	302.76				
Boat Maintenance		105.44	11.80	456.20	18.23				
Fishing Vehicle		582.53	270.32	8,984.09	2,784.03				
Fishing Vehicle Maintenance		149.72	32.19	1,097.93	37.37				
Vacation Home		16.53	14.19	8,775.90	15,749.04				
Vacation Home Maintenance		5.86	2.75	5.86	2.75				
Total		1,587.84	282.39	25,624.71	15,996.82				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk, only one observation was available.



Northern California

Table 6. Northern California Total Expenditures by Resident Status, 2000 (in thousands of dollars).

NORTHERN CALIFORNIA		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party/Charter	4,055	4,669	3,441	2,839	3,579	2,098
	Private/Rental	13,044	15,446	10,643	1,989	2,571	1,407
	Shore	16,879	20,306	13,453	1,455	2,109	802
Food	Party/Charter	3,269	3,901	2,636	902	1,192	611
	Private/Rental	8,634	10,307	6,961	724	982	466
	Shore	11,866	14,479	9,253	644	970	317
Lodging	Party/Charter	1,701	2,455	946	1,776	2,575	976
	Private/Rental	3,525	4,599	2,451	316	515	117
	Shore	9,033	12,052	6,015	669	1,184	154
Public Transportation	Party/Charter	363	781	0	4,533	7,545	1,522
	Private/Rental	122	252	0	92	234	0
	Shore	698	1,031	365	812	1,644	0
Boat Fuel	Private/Rental	9,358	11,094	7,623	370	502	238
Party/Charter Fees	Party/Charter	11,126	12,637	9,615	2,036	2,645	1,426
Access/Boat Launching	Party/Charter	166	242	91	49	107	0
	Private/Rental	1,176	1,455	898	93	143	43
	Shore	877	1,185	570	3	8	0
Equipment Rental	Party/Charter	1,017	1,504	530	740	1,776	0
	Private/Rental	646	965	327	43	107	0
	Shore	1,327	1,878	777	101	210	0
Bait & Ice	Party/Charter	515	721	309	48	82	14
	Private/Rental	5,816	6,879	4,753	258	352	164
	Shore	3,548	4,272	2,824	137	208	66
Total	Party/Charter	22,212	23,555	20,190	12,922	16,356	9,488
	Private/Rental	42,322	46,071	38,573	3,884	4,590	3,179
	Shore	44,229	49,588	38,871	3,821	5,049	2,593
Annual Expenditures		Residents			Non-Residents		
Rods and Reels		27,023	32,622	21,424			
Other Tackle		19,111	22,572	15,649			
Gear		5,621	7,005	4,237			
Camping Equipment		3,059	4,918	1,200			
Binoculars		683	1,002	364			
Clothing		5,174	7,480	2,868			
Magazines		811	1,108	514			
Club Dues		807	1,261	354			
License Fees		13,172	14,937	11,407			
Boat Accessories		50,137	71,438	28,837			
Boat Purchase		162,855	216,959	108,752			
Boat Maintenance		42,116	52,270	31,963			
Fishing Vehicle		232,680	439,564	25,795			
Fishing Vehicle Maintenance		59,801	85,162	34,441			
Vacation Home		6,604	17,400	0			
Vacation Home Maintenance		2,339	4,446	231			
All Sub-Totals		740,758	957,902	523,608	20,628	24,342	16,914
State Total		761,385	978,561	544,204			



California (All)

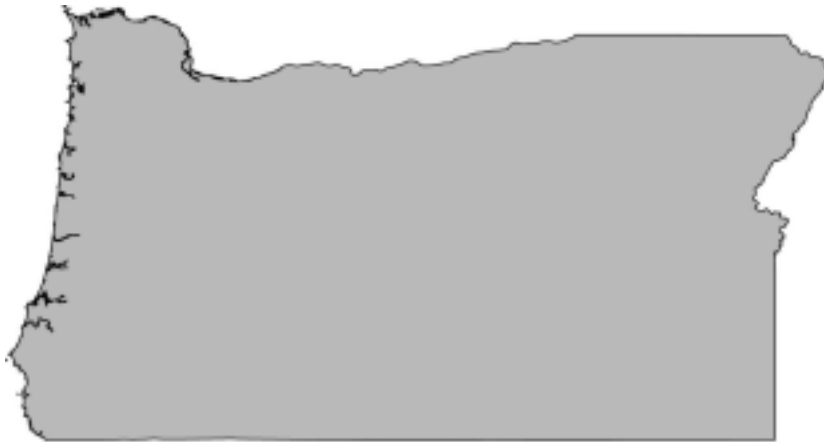
Table 7. California (All) Total Expenditures by Resident Status, 2000 (in thousands of dollars).

CALIFORNIA (ALL)		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party/Charter	12,272	13,320	11,225	10,438	11,872	9,004
	Private/Rental	24,958	13,320	21,428	7,170	9,117	5,224
	Shore	23,634	27,494	19,774	3,776	4,929	2,624
Food	Party/Charter	13,873	15,182	12,565	5,304	6,189	4,418
	Private/Rental	21,347	24,597	18,096	1,937	2,477	1,396
	Shore	17,655	20,704	14,605	1,329	1,818	841
Lodging	Party/Charter	2,695	3,603	1,788	8,672	10,532	6,812
	Private/Rental	4,400	5,695	3,104	1,930	3,065	796
	Shore	11,906	15,183	8,629	1,970	2,959	980
Public Transportation	Party/Charter	793	1,462	124	33,938	42,330	25,546
	Private/Rental	169	306	32	4,343	7,763	924
	Shore	860	1,214	506	1,316	2,464	168
Boat Fuel	Private/Rental	31,059	36,118	25,999	1,890	2,570	1,210
Party/Charter Fees	Party/Charter	57,712	63,353	52,071	6,367	7,577	5,158
Access/Boat Launching	Party/Charter	972	1,198	746	391	573	208
	Private/Rental	3,771	4,414	3,128	257	369	146
	Shore	1,846	2,253	1,439	169	363	0
Equipment Rental	Party/Charter	2,541	3,184	1,899	4,789	6,416	3,162
	Private/Rental	1,859	2,355	1,363	576	978	174
	Shore	1,477	2,042	912	131	243	19
Bait & Ice	Party/Charter	740	954	525	316	433	199
	Private/Rental	17,386	20,110	14,662	1,020	1,341	700
	Shore	6,297	7,767	4,828	332	461	204
Total	Party/Charter	91,599	93,742	85,565	70,216	79,210	61,222
	Private/Rental	104,949	118,417	97,307	19,125	23,344	14,906
	Shore	63,675	69,816	57,534	9,024	11,007	7,042
Annual Expenditures		Residents			Non-Residents		
Rods and Reels		87,379	100,428	74,329			
Other Tackle		61,712	71,043	52,382			
Gear		14,152	16,610	11,694			
Camping Equipment		7,090	9,770	4,409			
Binoculars		1,963	2,526	1,401			
Clothing		9,280	11,958	6,601			
Magazines		3,067	3,742	2,393			
Club Dues		2,404	3,150	1,658			
License Fees		35,296	39,378	31,215			
Boat Accessories		230,663	317,031	144,296			
Boat Purchase		688,820	831,723	545,917			
Boat Maintenance		167,606	194,586	140,625			
Fishing Vehicle		638,561	918,489	358,632			
Fishing Vehicle Maintenance		155,872	195,703	116,041			
Vacation Home		11,495	23,523	0			
Vacation Home Maintenance		5,316	8,918	1,715			
All Sub-Totals		2,380,901	2,711,403	2,050,536	98,365	108,495	88,235
State Total		2,479,266	2,809,924	2,148,746			

Table 8. Oregon Average Expenditures by Mode and Resident Status, 2000.

OREGON		Residents				Non-Residents			
Trip Expenditures		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Mode		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party/Charter	29.02	0.96	29.02	0.96	58.25	3.36	58.25	3.36
	Private/Rental	16.43	0.39	16.43	0.39	32.09	2.32	32.09	2.32
	Shore	20.52	0.69	20.52	0.69	54.09	5.06	54.09	5.06
Food	Party/Charter	21.01	1.20	23.32	1.25	23.14	2.03	25.31	2.09
	Private/Rental	9.53	0.39	13.67	0.51	22.86	1.87	25.39	2.00
	Shore	12.31	0.66	16.20	0.79	18.02	2.54	18.95	2.62
Lodging	Party/Charter	26.91	2.95	54.96	5.05	26.85	3.94	38.70	5.13
	Private/Rental	7.20	0.58	38.32	2.35	13.42	2.06	30.86	4.07
	Shore	11.38	1.18	36.91	3.09	17.04	3.52	30.77	5.37
Public Transportation	Party/Charter	1.14	0.30	17.06	2.43	46.99	13.61	248.37	53.71
	Private/Rental	0.30	0.09	22.52	5.25	14.55	5.27	157.01	46.44
	Shore	0.51	0.17	15.61	4.06	4.71	1.50	25.10	4.69
Boat Fuel	Private/Rental	6.34	0.27	6.80	0.28	10.94	3.14	12.72	3.63
Party/Charter Fees	Party/Charter	50.39	2.73	58.50	2.83	36.39	3.20	41.98	3.33
Access/Boat Launching	Party/Charter	0.21	0.10	5.93	2.38	2.24	1.42	24.89	14.54
	Private/Rental	1.38	0.06	2.95	0.11	2.08	0.25	3.74	0.38
	Shore	0.17	0.05	3.85	0.84	4.55	3.81	30.03	24.63
Equipment Rental	Party/Charter	15.06	1.87	64.58	3.96	24.76	3.87	68.57	6.14
	Private/Rental	0.35	0.15	14.80	5.71	1.53	0.50	22.52	4.78
	Shore	1.39	0.29	18.17	2.84	7.12	2.86	38.54	12.17
Bait & Ice	Party/Charter	1.02	0.17	4.35	0.55	1.34	0.33	3.63	0.79
	Private/Rental	2.86	0.10	4.39	0.13	4.44	0.38	5.79	0.45
	Shore	3.37	0.26	5.14	0.37	5.94	1.27	7.76	1.57
Total	Party/Charter	144.75	4.70	257.71	7.97	219.96	15.61	509.71	56.46
	Private/Rental	44.40	0.87	119.90	8.14	101.91	7.16	290.13	47.11
	Shore	49.66	1.58	116.40	6.00	111.46	8.43	205.23	28.99
Annual Expenditures		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		43.08	3.85	225.52	10.34				
Other Tackle		33.19	2.68	74.79	8.40				
Gear		8.37	0.89	91.63	6.53				
Camping Equipment		6.40	1.45	175.56	26.09				
Binoculars		3.09	0.98	174.07	23.08				
Clothing		8.73	1.49	130.40	13.15				
Magazines		1.07	0.19	34.45	3.71				
Club Dues		2.31	0.80	96.60	23.94				
License Fees		32.37	1.81	44.35	1.78				
Boat Accessories		56.11	7.20	411.73	37.78				
Boat Purchase		282.41	44.43	3,226.09	311.09				
Boat Maintenance		59.39	6.99	269.74	24.26				
Fishing Vehicle		508.66	123.62	7,596.54	918.93				
Fishing Vehicle Maintenance		76.61	9.52	614.51	35.65				
Vacation Home		109.50	51.73	6,420.03	2,313.31				
Vacation Home Maintenance		141.32	121.70	141.32	121.70				
Total		1,372.60	186.99	19,727.32	2,512.55				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk, only one observation was available.



Oregon

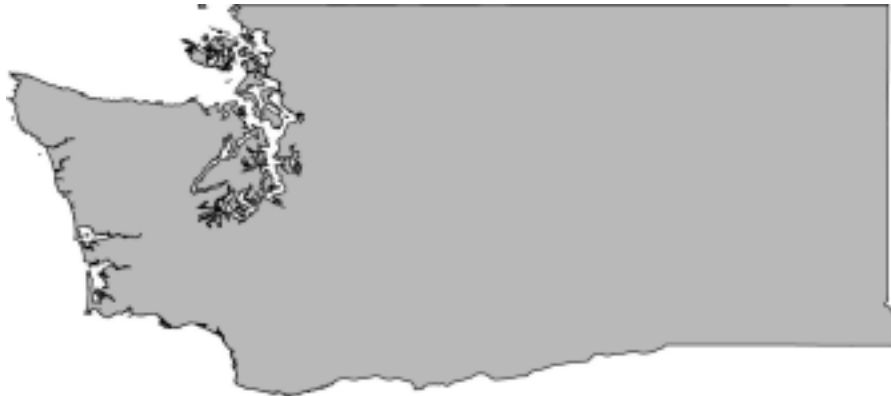
Table 9. Oregon Total Expenditures by Resident Status, 2000 (in thousands of dollars).

OREGON		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party/Charter	1,964	2,282	1,646	1,896	2,364	1,428
	Private/Rental	8,517	10,069	6,964	2,262	2,849	1,675
	Shore	3,895	4,937	2,854	1,214	1,670	759
Food	Party/Charter	1,422	1,686	1,157	753	963	543
	Private/Rental	4,942	5,899	3,984	1,611	2,047	0
	Shore	2,336	2,975	1,697	405	568	241
Lodging	Party/Charter	1,821	2,296	1,346	874	1,189	559
	Private/Rental	3,732	4,613	2,851	946	1,296	596
	Shore	2,160	2,806	0	383	558	0
Public Transportation	Party/Charter	77	118	0	1,529	2,455	603
	Private/Rental	154	253	0	1,026	1,784	268
	Shore	96	147	0	106	166	45
Boat Fuel	Private/Rental	3,287	3,927	2,647	771	1,234	0
Party/Charter Fees	Party/Charter	3,410	4,032	2,788	1,184	1,514	854
Access/Boat Launching	Party/Charter	14	28	0	73	164	0
	Private/Rental	718	860	576	147	193	0
	Shore	32	48	17	102	230	0
Equipment Rental	Party/Charter	1,019	1,309	0	806	1,108	503
	Private/Rental	184	335	0	108	181	35
	Shore	264	368	161	160	268	52
Bait & Ice	Party/Charter	69	94	44	44	67	20
	Private/Rental	1,480	1,760	1,200	313	399	227
	Shore	641	823	458	133	195	71
Total	Party/Charter	9,796	10,492	8,863	7,159	8,354	5,963
	Private/Rental	23,013	25,168	20,858	7,184	8,392	5,976
	Shore	9,425	10,824	8,026	2,503	3,051	1,954
Annual Expenditures		Residents			Non-Residents		
Rods and Reels		15,741	18,992	12,490			
Other Tackle		12,129	14,465	9,794			
Gear		3,058	3,780	2,337			
Camping Equipment		2,339	3,410	1,267			
Binoculars		1,128	1,836	419			
Clothing		3,191	4,315	2,067			
Magazines		391	534	247			
Club Dues		845	1,428	262			
License Fees		11,828	13,663	9,994			
Boat Accessories		21,113	26,758	15,467			
Boat Purchase		106,257	140,103	72,411			
Boat Maintenance		22,345	27,913	0			
Fishing Vehicle		191,383	282,246	100,521			
Fishing Vehicle Maintenance		28,824	36,328	21,320			
Vacation Home		41,199	78,468	0			
Vacation Home Maintenance		53,170	140,392	0			
All Sub-Totals		557,176	693,366	420,985	16,845	18,631	15,059
State Total		574,021	710,223	437,818			

Table 10. Washington Average Expenditures by Mode and Resident Status, 2000.

WASHINGTON		Residents				Non-Residents			
Trip Expenditures	Mode	All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
		Mean	Standard Error	Mean	Standard Error	Mean	Standard Error	Mean	Standard Error
Private Transportation	Party/Charter	25.78	3.12	25.78	3.12	71.32	.	71.32	.
	Private/Rental	8.99	0.34	8.99	0.34	77.98	5.12	77.98	5.12
	Shore	58.94	50.39	58.94	50.39	57.52	6.14	57.52	6.14
Food	Party/Charter	23.21	6.38	27.08	6.00	40.00	.	40.00	.
	Private/Rental	9.49	0.40	12.31	0.48	17.35	2.73	18.02	2.75
	Shore	6.22	0.56	9.64	0.80	22.30	4.69	26.02	4.95
Lodging	Party/Charter	45.18	18.54	63.25	20.89	1.60	.	1.60	.
	Private/Rental	2.86	0.43	38.87	4.59	11.82	4.48	31.92	9.24
	Shore	2.01	0.65	33.21	9.10	24.71	8.60	47.17	13.28
Public Transportation	Party/Charter	.	.	.	.	.	.	.	.
	Private/Rental	0.50	0.13	19.22	3.73	37.46	19.84	135.79	61.66
	Shore	0.52	0.10	6.94	0.74	152.44	99.03	304.89	190.37
Boat Fuel	Private/Rental	10.37	0.33	11.39	0.35	12.81	3.02	13.83	3.17
Party/Charter Fees	Party/Charter	90.71	14.33	90.71	14.33	10.00	.	10.00	.
	Private/Rental	.	.	.	.	17.50	.	17.50	.
	Shore	2.65	0.14	4.05	0.20	4.91	1.76	8.28	2.68
Access/Boat Launching	Party/Charter	0.18	0.06	3.38	1.01	.	.	.	.
	Private/Rental	10.29	10.29	72.00	.	50.00	.	50.00	.
	Shore	0.53	0.24	26.60	11.00	0.77	0.60	7.49	4.84
Equipment Rental	Party/Charter	0.14	0.10	12.70	6.96	9.29	5.17	65.00	7.64
	Private/Rental	0.17	0.17	1.00	.	62.50	.	62.50	.
	Shore	3.07	0.15	4.79	0.22	5.21	1.02	6.05	1.09
Bait & Ice	Party/Charter	1.38	0.22	4.97	0.70	3.03	0.79	4.24	0.93
	Private/Rental	195.34	26.56	44.34	116.20	252.92	.	252.92	.
	Shore	38.46	0.83	19.75	90.22	199.83	22.32	199.83	22.32
Total	Shore	69.40	50.40	129.78	51.70	269.28	99.84	249.38	20.90
Annual Expenditures		All (\$)		Spenders (\$)		All (\$)		Spenders (\$)	
Rods and Reels		82.12	6.21	261.29	13.98				
Other Tackle		82.87	5.02	93.42	4.03				
Gear		19.36	2.18	167.10	11.06				
Camping Equipment		13.52	4.29	280.51	34.73				
Binoculars		3.18	0.98	95.84	13.89				
Clothing		13.29	1.99	120.53	12.22				
Magazines		2.42	0.44	38.94	6.26				
Club Dues		1.55	0.37	52.48	9.31				
License Fees		49.50	2.31	61.09	3.00				
Boat Accessories		232.47	24.34	728.26	50.99				
Boat Purchase		530.56	73.59	2,791.99	214.75				
Boat Maintenance		223.66	22.26	480.07	36.48				
Fishing Vehicle		969.64	167.71	7,874.16	1,158.44				
Fishing Vehicle Maintenance		196.92	18.34	754.77	79.64				
Vacation Home		152.15	63.47	8,164.13	3,219.72				
Vacation Home Maintenance		23.20	7.91	23.20	7.91				
Total		2,596.40	197.88	21,987.78	3,430.31				

* indicates standard error based on < 10 observations. If the cell is missing (.) and has an asterisk, only one observation was available.



Washington

Table 11. Washington Total Expenditures by Resident Status, 2000 (in thousands of dollars).

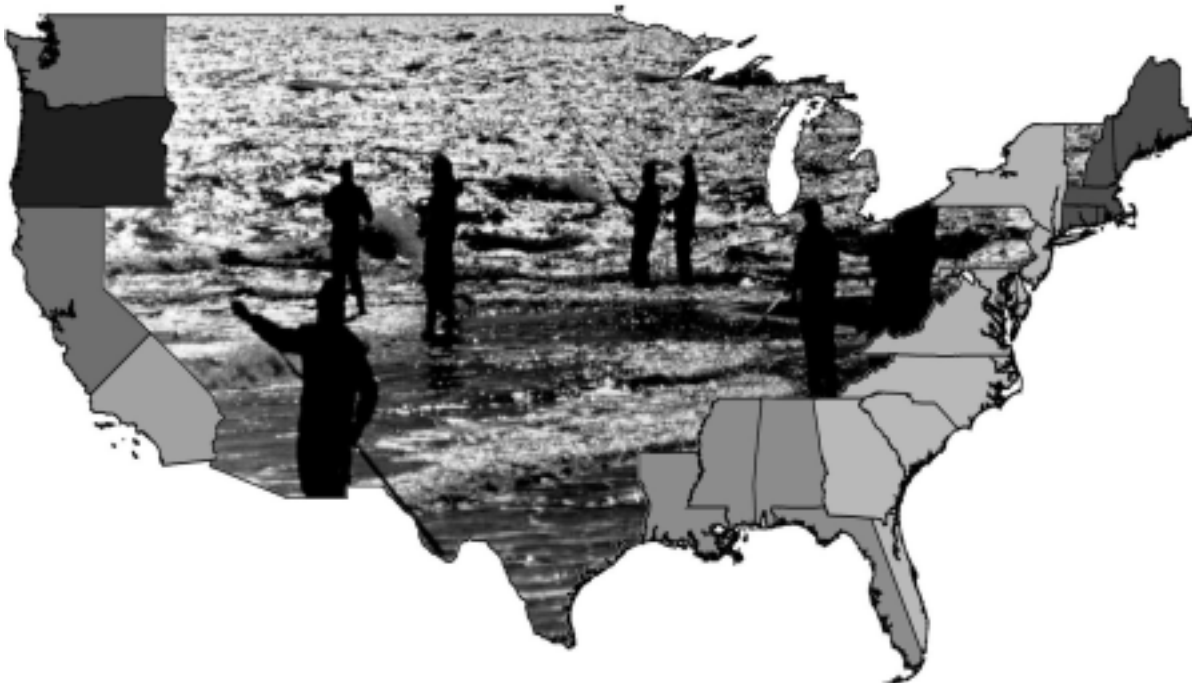
WASHINGTON		Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Mode	Residents			Non-Residents		
Private Transportation	Party/Charter	797	1,055	539	207	0	0
	Private/Rental	9,818	11,843	7,793	2,807	3,642	1,972
	Shore	25,241	55,505	0	2,169	2,985	1,354
Food	Party/Charter	718	1,134	302	116	0	0
	Private/Rental	10,367	12,532	8,202	624	879	0
	Shore	2,663	3,363	1,964	841	1,230	452
Lodging	Party/Charter	1,397	2,556	238	5	0	0
	Private/Rental	3,128	4,227	2,029	426	759	92
	Shore	863	1,296	0	932	1,509	0
Public Transportation	Party/Charter	0	0	0	0	0	0
	Private/Rental	544	842	0	1,348	2,782	0
	Shore	222	301	0	5,749	11,632	0
Boat Fuel	Private/Rental	11,331	13,621	9,041	461	706	0
Party/Charter Fees	Party/Charter	2,805	3,870	1,741	29	0	0
Access/Boat Launching	Party/Charter	0	0	0	51	0	0
	Private/Rental	2,900	3,536	2,264	177	308	0
	Shore	75	116	34	0	0	0
Equipment Rental	Party/Charter	318	942	0	145	0	0
	Private/Rental	577	1,101	0	28	70	0
	Shore	62	119	4	350	663	37
Bait & Ice	Party/Charter	5	15	0	182	0	0
	Private/Rental	3,353	4,077	2,630	188	275	100
	Shore	593	782	403	114	173	55
Total	Party/Charter	6,041	7,445	4,279	735	1,072	397
	Private/Rental	42,019	46,084	37,953	6,058	7,794	4,322
	Shore	29,718	59,995	0	10,156	16,144	4,168
Annual Expenditures		Residents			Non-Residents		
Rods and Reels		40,768	48,935	32,601			
Other Tackle		41,141	48,539	33,742			
Gear		9,610	12,093	7,128			
Camping Equipment		6,710	10,975	2,446			
Binoculars		1,581	2,552	610			
Clothing		6,597	8,725	4,469			
Magazines		1,201	1,663	740			
Club Dues		768	1,146	390			
License Fees		24,574	28,585	20,563			
Boat Accessories		118,836	147,412	90,261			
Boat Purchase		271,210	351,509	190,911			
Boat Maintenance		114,332	140,899	0			
Fishing Vehicle		495,663	671,729	319,596			
Fishing Vehicle Maintenance		100,661	123,070	78,252			
Vacation Home		77,775	140,279	0			
Vacation Home Maintenance		11,858	19,701	4,016			
All Sub-Totals		1,401,065	1,612,117	1,190,010	16,948	23,192	10,705
State Total		1,418,013	1,629,158	1,206,867			



Pacific Coast Totals

Table 12. Total Pacific Coast Region Expenditures by Resident Status, 2000 (millions of dollars).

PACIFIC COAST REGION	Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures	Residents (\$)			Non-Residents (\$)		
Private Transportation	111	142	80	32	35	29
Food	75	81	70	13	14	12
Lodging	32	36	28	16	19	14
Public Transportation	3	4	2	49	60	38
Boat Fuel	46	51	40	3	4	2
Party/Charter Fees	64	70	58	8	9	6
Access/Boat Launching	10	11	9	1	2	1
Equipment Rental	8	10	7	7	9	5
Bait & Ice	31	34	27	3	3	2
Trip Sub-Totals	380	413	347	132	144	120
Annual Expenditures						
Rods and Reels	144	160	128			
Other Tackle	115	127	103			
Gear	27	30	23			
Camping Equipment	16	21	11			
Binnoculars	5	6	3			
Clothing	19	23	15			
Magazines	5	5	4			
Club Dues	4	5	3			
License Fees	72	78	66			
Boat Accessories	371	462	279			
Boat Purchase	1,066	1,234	899			
Boat Maintenance	304	343	266			
Fishing Vehicle	1,326	1,669	983			
Fishing Vehicle Maintenance	285	332	239			
Vacation Home	98	161	34			
Vacation Home Maintenance	103	199	8			
Equipment and Durable Sub-Totals	3,959	4,361	3,546			
All Sub-Totals	4,339	4,743	3,925	132	144	120
Pacific Coast Region Total	4,471	4,875	4,057			



United States Totals

Table 13. Total United States Expenditures by Coastal Resident Status 1998, 1999, and 2000 (millions of dollars)¹.

UNITED STATES	Total	Upper Bound	Lower Bound	Total	Upper Bound	Lower Bound
Trip Expenditures¹	Coastal Residents (\$)			Non-Coastal Residents (\$)		
Private Transportation	298	330	266	123	131	115
Food	577	599	555	408	439	378
Lodging	473	604	359	303	371	244
Public Transportation	27	42	18	156	234	99
Boat Fuel	377	395	359	61	68	54
Party/Charter Fees ¹	123	132	114	106	130	82
Access/Boat Launching	76	83	69	18	21	15
Equipment Rental	18	22	15	12	15	9
Bait & Ice ²	276	288	263	64	72	55
Trip Sub-Totals	2,245	2,385	2,122	1,251	1,362	1,160
Annual Expenditures						
Rods and Reels ³	1,195	1,259	1,131	240	270	209
Other Tackle & Gear ^{3,4}	619	652	586	133	149	117
Camping Equipment	91	102	80			
Binnoculars	50	56	45			
Clothing	116	125	106			
Processing/Taxidermy ⁵	19	22	16			
Magazines	59	62	56			
Club Dues	61	66	56			
License Fees ⁶	145	152	138			
Miscellaneous ⁵	82	90	75			
Boat Maintenance/Expenses	1,298	1,411	1,100			
Power Boat Purchase ⁷	8,089	9,455	6,722			
Non-Power Boat Purchase ⁵	60	87	33			
Electronics ⁵	213	262	164			
Fishing Vehicle	4,141	4,913	3,368			
Fishing Vehicle Maintenance ⁸	285	332	239			
Vacation Home	523	852	193			
Vacation Home Maintenance ⁸	103	199	8			
Equipment and Durable Sub-Totals	17,151	18,765	15,486			
All Sub-Totals	19,396	21,016	17,727	1,251	1,362	1,160
United States Total	20,647	22,267	18,975			

¹ Southeast party boat mode expenditures are not included, as data for this mode is collected in a separate survey.

² Because Bait and Ice expenditures were reported in separate categories in the Northeast and Southeast, they were combined to conform with the single category reported on the Pacific Coast.

³ Pacific Coast non-resident expenditures are not included in this total because the Pacific Coast survey did not collect information regarding the amount of these goods purchased in the state of intercept.

⁴ The Pacific Coast survey included an additional category called "Gear" that was a subset of the items included in "Other Tackle" in the Northeast and Southeast surveys. Therefore, "Gear" and "Other Tackle" categories were summed for the Pacific Coast.

⁵ These expenditure categories were not collected on the Pacific Coast.

⁶ License Fee expenditures were not collected in the Northeast Survey.

⁷ The Pacific Coast survey included an additional category called "Boat Accessories" that was a subset of the items included in "Power Boat Purchases" in the Northeast and Southeast surveys. Therefore, these categories were summed for the Pacific Coast.

⁸ Both of these maintenance categories were only collected on the Pacific Coast.

Total annual expenditures by resident anglers in PC coastal states in 2000 were substantially larger than those of non-residents. In part, this was because resident participants outnumbered non-residents and took more trips than non-residents. In most states, anglers fishing from private or rental boats spent considerably more than those who fished from shore or from a charter boat. Across the entire PC, the highest trip expenditures were for food, lodging, and boat fuel respectively, while the largest annual purchases were for fishing vehicles and boats respectively (Table 12). Taken as a whole, the expenditure estimates provide an indication of the importance of marine recreational fishing to the economies of the coastal states in the PC.

At first glance, the state-level estimates of total marine recreational expenditures appear large. About 89% of the total expenditure was for fishing equipment and durable items, items that may last for many years. The costs of several durable items, boats, boat accessories, boat maintenance and fishing vehicles/trailers, comprised just under 69% of total angler expenditures in 2000. Although anglers were asked to indicate the total costs of durable purchases made during the past 12 months, their actual outlay in 2000 may have been lower if purchases were financed. Because the main objective of this report was to estimate the total sales generated by anglers' expenditures, no attempt was made to identify this type of transaction.

State-level expenditures estimated in this study are roughly 8 times greater than those estimated from the U.S. Fish and Wildlife Service's 1996 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation (USFWS 1996).⁵ State-level participation estimates derived from the USFWS' survey are about 1 to 2 times lower than MRFSS participation estimates for 1996. As well, the USFWS' estimates of durable purchases are substantially lower than those estimated in this report.

Differences in sampling procedures may also have contributed to some of these disparities. The base MRFSS survey is specifically designed to provide statistically reliable estimates of saltwater angling effort, participation, and finfish catch. In contrast, the USFWS' survey is designed to provide information on fishing, hunting, and wildlife-watching activities. Saltwater fishing comprises a small portion of these recreation-related activities in most states. Thus, the coverage and sample sizes for saltwater fishing in the USFWS' survey are considerably smaller than in the MRFSS.

Purchases of boats and boat accessories were the second largest expense category in each PC state, behind fishing vehicle purchases. In fact, the estimate generated for the PC region for boat and boat accessory purchases (\$1.44 billion; Table 12) was greater than the National Marine Manufacturers Association (NMMA) estimate of total retail

Discussion

sales of new and used recreational boats across all of the PC coastal states in 1997 (\$1.40 billion; NMMA 1998). The NMMA estimates, however, do not include personal sales of pre-owned boats. According to data obtained from United States Department of Labor (USDOL, 1998), 53% of boat purchases in 1998 occurred through personal sales. Thus, the difference between our estimate and the NMMA estimate may be due to the inclusion of personal sales.

Results of the 2000 expenditure survey need to be considered in light of a number of data limitations and assumptions. First, even with 12,683 complete responses, sample sizes were insufficient to calculate statistically reliable mean expenditures across some categories in some states. In addition, because only a small portion of the survey respondents actually reported an expense for all of the expenditure items, estimates of purchases by 'spenders' were also constrained by sample size. Second, non-resident expenditure estimates are conservative as they include only trip expenses, and not any annual expenditures. However, this bias may be small because many durable items are likely to be purchased in an angler's state of residence and not in a coastal PC state. Lastly, although adjustments were made for avidity bias, no corrections were made for non-response bias. Anglers with considerable expenses may have been more willing to complete a lengthy telephone follow-up survey than those that spent very little, although no significant

differences were detected in avidity between non-respondents and those that completed the follow-up survey.

Because this is the last regional volume in a series that has estimated angler expenditures across the US, Table 13 is provided to summarize nationwide expenditures on marine recreational angling. Nationwide, the estimates presented here are 2.8 times higher than those estimated from the 1996 USFWS survey. Again, the same general explanations provided above apply here: participation and effort are higher using the MRFSS and the MRFSS provides a better sample to capture saltwater angling. Nationwide, boat purchases and accessories generate \$9.3 billion dollars in expenditures (Table 13). This is 1.6 times the estimate NMMA produced in 1998 (\$5.8 billion; NMMA 1998). Again, some of this difference can be attributed to personal sales of pre-owned boats.

Future Research

Expenditure estimates in this report will be used in the future to construct regional economic impact models. These models will be used to track the economic activity (i.e., sales, income, employment, and taxes) generated directly and indirectly from anglers' expenditures in the PC. Ultimately, the models will provide the capability to recognize and assess relative impacts of

recreational fishing management actions on communities and businesses. In other words, the models will delineate inter-sectoral linkages between marine recreation-related businesses within each state thereby allowing quantification of the distributional impacts arising from changes in fishing activity, incomes, business practices, and/or other factors outside the control of fisheries management. An assessment of these impacts is required under the National Environmental Policy Act (NEPA), Executive Order 12866, and National Standard 8 of the Magnuson-Stevens Fisheries Conservation and Management Act.

Endnotes

1. Because of the geographic boundary created by the Cascade Mountain range, some Eastern Oregon residents are forced to travel in California to fish sites in Oregon. If one assumes that all gas purchased by Oregon residents on Oregon trips is purchased in Oregon, including California miles in the calculation of travel costs is consistent with the calculation made in other states.
2. Although \hat{R} is an unbiased estimator of R , equation 1 is not an unbiased estimator of \bar{R} because it is a ratio estimator (Thomson 1991). However, as the sample size increases the bias becomes negligible.
3. The participation estimates contained in Table 2 are not additive across waves. A participant could have fished in more than one wave. Addition of the estimates across waves results in substantially greater numbers of annual participants than that shown in Table 2. At the state-level (see Table 2), resident participation estimates are additive but non-resident participants should not be added across states since they could have fished in more than one state.
4. Private transportation expenses were calculated for all respondents from the round trip miles traveled in the state where the fishing trip occurred. Thus, average expenditures are identical for the 'spenders' and the 'all' category.
5. The USFWS' 1996 expenditure estimates were adjusted to their 1999 equivalent, prior to making the comparison, by using the Bureau of Labor Statistics Consumer Price Index.

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Appendix 1: Intercept Add-on Survey Instrument

**2000 PACIFIC COAST ANGLER EXPENDITURE SURVEY
ADD-ON TO MRFSS INTERCEPT
VERSION #3**

IF INTERVIEWER IS NOT CERTAIN WHETHER RESPONDENT IS 16 YEARS OF AGE OR OLDER, ASK RESPONDENT. IF <16 YEARS OF AGE, THANK RESPONDENT AND TERMINATE INTERVIEW.

1. Is today's fishing part of an overnight stay away from home? (ONE-DAY FISHING TRIPS INVOLVING DEPARTURE OF A PARTY/CHARTER OR PRIVATE/RENTAL BOAT FROM PORT ON THE NIGHT PRIOR TO FISHING SHOULD NOT BE CONSIDERED AN "OVERNIGHT STAY AWAY FROM HOME" UNLESS ANGLER IS SPENDING ADDITIONAL NIGHTS AWAY FROM HOME.)

Yes	1	SKIP TO Q6.
No	2	
Don't know	8	SKIP TO Q6.
Refused	9	SKIP TO Q6.

The next questions are to help us determine the economic impact of saltwater recreational fishing on the [STATE OF INTERCEPT] economy.

2. Including yourself, how many people are traveling together on this trip away from home?

ENTER NUMBER OF PEOPLE (IF "1", GO TO Q4)

Don't know	98	SKIP TO Q6.
Refused	99	SKIP TO Q6.

3. Including yourself, how many of the [Q2 RESPONSE] people are paying for the expenses of this trip?

ENTER NUMBER OF PEOPLE (<=Q2 RESPONSE)

Don't know	98	SKIP TO Q6.
Refused	99	SKIP TO Q6.

4. IF Q2 RESPONSE=1 OR Q3 RESPONSE=1, ASK: Now I'd like to ask you about the amount of money being spent for this entire trip away from home, not just the time spent fishing, in each of the following categories:

IF Q3 RESPONSE>1, ASK: Now I'd like to ask you about the amount of money being spent for this entire trip away from home, not just the time spent fishing. For each expenditure category that I mention, please estimate either your own personal expenses or the expenses for your entire group, whichever is easier for you to remember.

FOR EACH EXPENDITURE CATEGORY, INTERVIEWER SHOULD FILL IN AMOUNT PROVIDED BY RESPONDENT. ALL EXPENSES SHOULD BE REPORTED TO THE NEAREST DOLLAR. IF Q2 RESPONSE=1 OR Q3 RESPONSE=1, INTERVIEWER SHOULD RECORD EXPENSES IN THE "PERS" COLUMN. IF Q3 RESPONSE > 1, INTERVIEWER SHOULD RECORD PERSONAL EXPENSES IN THE "PERS" COLUMN AND GROUP EXPENDITURES IN THE "GROUP" COLUMN, WHICHEVER IS APPROPRIATE.

IT IS IMPORTANT THAT RESPONSES REFLECT EXPENSES INCURRED DURING THE ENTIRE TIME AWAY FROM HOME, INCLUDING MEALS EATEN WHILE TRAVELING TO AND FROM THE FISHING SITE. BOAT FUEL SHOULD BE PRO-RATED TO REFLECT ACTUAL AMOUNT CONSUMED (RATHER THAN BOUGHT) DURING THE TRIP AWAY FROM HOME. Q4b PERTAINS ONLY TO ITEMS (E.G., FISHING GEAR) THAT WERE RENTED SPECIFICALLY FOR THE TRIP. MORE GENERAL QUESTIONS REGARDING MAINTENANCE AND REPAIR OF THE ANGLER'S OWN BOAT AND EQUIPMENT WILL BE ASKED IN THE TELEPHONE FOLLOW-UP. SIMILARLY, Q4d PERTAINS ONLY TO FEES SPECIFIC TO THE TRIP. MOORAGE FEES THAT ARE PAID ON A SEASONAL RATHER THAN PER-TRIP BASIS WILL BE COVERED IN THE TELEPHONE FOLLOW-UP.

ASK Q4a-Q4e OF ALL RESPONDENTS:

	Pers	Group
4a. Food, drink and refreshments?	\$ _____	\$ _____
4b. Rental of boat, fishing or camping equipment?	\$ _____	\$ _____
4c. <u>Public</u> transportation, including airplane, train, bus and car rental?	\$ _____	\$ _____
4d. Parking, access and boat launching fees?	\$ _____	\$ _____
4e. Bait and ice?	\$ _____	\$ _____

ASK Q4f ONLY IF INTERCEPT MODE IS PRIVATE/RENTAL BOAT:

4f. Boat fuel? \$ _____ \$ _____

ASK Q4g ONLY IF INTERCEPT MODE IS PARTY/CHARTER BOAT:

4g. Passenger fees, tips, filleting/smoking/canning? \$ _____ \$ _____

ASK Q4h ONLY IF RESPONDENT UNABLE TO ITEMIZE:

4h. Total \$ _____ \$ _____

FOR Q4a-Q4h, DON'T KNOW=9998 and REFUSED=9999 SHOULD BE INCLUDED AMONG CODING OPTIONS.

IF RESPONDENT REPORTS POSITIVE EXPENDITURES IN Q4, GOTO Q5.
OTHERWISE SKIP TO Q6.

IF COUNTY OF INTERCEPT=COUNTY OF RESIDENCE, SKIP TO Q6.
IF COUNTY OF INTERCEPT NE COUNTY OF RESIDENCE BUT COUNTY OF
INTERCEPT AND COUNTY OF RESIDENCE ARE IN THE SAME STATE, ASK Q5a

AND Q5b BUT NOT Q5c.

IF COUNTY OF INTERCEPT AND COUNTY OF RESIDENCE ARE IN DIFFERENT STATES, ASK Q5a, Q5b AND Q5c.

5. What percentage of the expenses that you just described were made:

5a. In [COUNTY OF INTERCEPT]? **ENTER % ($\geq 0, \leq 100$)**

Don't know 998

Refused 999

IF Q5a RESPONSE = 100, 998 OR 999, SKIP TO Q6.

5b. Outside [COUNTY OF INTERCEPT]

but in [STATE OF INTERCEPT]? **ENTER % ($\leq 100 - \text{Q5a RESPONSE}$)**

Don't know 998

Refused 999

IF (Q5a RESPONSE + Q5b RESPONSE = 100) OR (Q5b RESPONSE EQ 998 OR 999), SKIP TO Q6.

5c. Outside [STATE OF INTERCEPT]? **ENTER % ($= 100 - \text{Q5a RESPONSE} - \text{Q5b RESPONSE}$)**

Don't know 998

Refused 999

6. **IF Q1 RESPONSE = "2", ASK:** We'd like to find out more about your other fishing expenses over the past year, but don't want to take any more of your time right now. May we call you at home and include you in our follow-up survey?

IF Q1 RESPONSE = "1", "8" OR "9", ASK: We're interested in estimating the economic impact of saltwater recreational fishing on the [STATE OF INTERCEPT] economy. In order to do this, I'd like to find out how much you spend on fishing, but I don't want to take any more of your time right now. May we call you at home and include you in our follow-up survey?

Yes 1 → Name: _____

Phone: (____)

No 2

Thank you for your time.

Appendix 2: Phone Follow-up Survey Instrument

**2000 PACIFIC COAST ANGLER EXPENDITURE SURVEY
TELEPHONE FOLLOW-UP TO MRFSS INTERCEPT ADD-ON
VERSION #3**

INTRODUCTION

Hello, may I speak with _____? (IF RESPONDENT IS NOT AVAILABLE, ASK FOR BEST TIME TO CALL BACK.)

“Hello, this is _____ calling from _____. You recently spoke with a field interviewer during your fishing trip in [STATE OF INTERCEPT] on [DATE OF INTERCEPT]. We are calling now to collect more detailed information that could not be collected in the field. Your answers will be kept confidential. This will take _____ minutes.” **DO NOT ASK IF THIS IS CORRECT BUT BE PREPARED TO CODE AS FOLLOWS IF RECEIVE NEGATIVE RESPONSE:**

Was not interviewed	8	THANK AND TERMINATE
Did not volunteer for interview	9	THANK AND TERMINATE

COST AND OTHER DETAILS OF INTERCEPTED TRIP

IF INTERCEPTED TRIP WAS A MULTI-DAY TRIP (Q1 RESPONSE IN INTERCEPT ADD-ON WAS “1”), BEGIN INTERVIEW WITH Q1. IF INTERCEPTED TRIP WAS A ONE-DAY TRIP (Q1 RESPONSE IN INTERCEPT ADD-ON WAS “2”), BEGIN INTERVIEW WITH Q10. IF INTERCEPTED TRIP WAS OF UNKNOWN LENGTH (Q1 RESPONSE IN INTERCEPT ADD-ON WAS “8” OR “9”), BEGIN INTERVIEW WITH Q13.

1. When you were interviewed on [DATE OF INTERCEPT], you said that your fishing on that day was part of an overnight trip away from home. How many nights were you away from your home on that trip?

ENTER NUMBER OF NIGHTS

Don’t know	98
Refused	99

2. On how many days did you actually fish during that overnight trip away from your home?

ENTER NUMBER OF DAYS (<= Q1 RESPONSE+1)

Don’t know	98
Refused	99

IF Q2 RESPONSE >= Q1 RESPONSE, SKIP TO Q4. OTHERWISE CONTINUE.

3. On how many of the days that you didn't fish on that trip did you engage in some other type of recreation?

ENTER NUMBER OF DAYS (\leq Q2 RESPONSE-Q1 RESPONSE+1)

Don't know	98
Refused	99

4. Would you have made that trip if it weren't for fishing?

Yes	1
No	2
Don't know	8
Refused	9

5. Including yourself, how many people traveled together on that trip?

ENTER NUMBER OF PEOPLE (IF "1", SKIP TO Q8)

Don't know	98	SKIP TO Q10.
Refused	99	SKIP TO Q10.

6. Including yourself, how many of the [Q5 RESPONSE] people who traveled together on that trip actually went fishing?

ENTER NUMBER OF PEOPLE (\leq Q5 RESPONSE)

Don't know	98	SKIP TO Q10.
Refused	99	SKIP TO Q10.

7. Including yourself, how many of the [Q5 RESPONSE] people paid for the expenses of that trip?

ENTER NUMBER OF PEOPLE (\leq Q5 RESPONSE)

Don't know	98	SKIP TO Q10.
Refused	99	SKIP TO Q10.

8. **IF Q5 RESPONSE=1 OR Q7 RESPONSE=1, ASK:** Now I'd like to ask you about the amount of money that you spent for the entire trip away from home, not just the time spent fishing, in each of the following categories:

IF Q7 RESPONSE>1, ASK: Now I'd like to ask you about the amount of money that was spent for the entire trip away from home, not just the time spent fishing. For each expenditure category that I mention, please estimate either your own personal expenses or the expenses for your entire group, whichever is easier for you to remember.

FOR EACH EXPENDITURE CATEGORY, INTERVIEWER SHOULD FILL IN

AMOUNT PROVIDED BY RESPONDENT. ALL EXPENSES SHOULD BE REPORTED TO THE NEAREST DOLLAR. IF Q5 RESPONSE=1 OR Q7 RESPONSE=1, INTERVIEWER SHOULD RECORD EXPENSES IN THE “PERS” COLUMN. IF Q7 RESPONSE > 1, INTERVIEWER SHOULD RECORD PERSONAL EXPENSES IN THE “PERS” COLUMN AND GROUP EXPENDITURES IN THE “GROUP” COLUMN, WHICHEVER IS APPROPRIATE.

IT IS IMPORTANT THAT RESPONSES REFLECT EXPENSES INCURRED DURING THE ENTIRE TIME AWAY FROM HOME, INCLUDING LODGING AND MEAL COSTS INCURRED WHILE TRAVELING OR ENGAGED IN NON-FISHING AS WELL AS FISHING ACTIVITIES. ITEMS SUCH AS FOOD, BAIT AND BOAT FUEL SHOULD BE PRO-RATED TO REFLECT ACTUAL AMOUNTS CONSUMED (RATHER THAN BOUGHT) DURING THE TRIP AWAY FROM HOME. Q8d PERTAINS ONLY TO ITEMS (E.G., FISHING GEAR) THAT WERE RENTED SPECIFICALLY FOR THE TRIP. MORE GENERAL QUESTIONS REGARDING MAINTENANCE AND REPAIR OF THE ANGLER’S OWN BOAT AND EQUIPMENT WILL BE ASKED LATER IN THIS QUESTIONNAIRE. SIMILARLY, Q8e PERTAINS ONLY TO FEES SPECIFIC TO THE TRIP. MOORAGE FEES THAT ARE PAID ON A SEASONAL RATHER THAN PER-TRIP BASIS WILL BE COVERED LATER IN THIS QUESTIONNAIRE.

ASK Q8a-Q8f OF ALL RESPONDENTS:

	Pers	Group
8a. Lodging at motels, cabins, lodges or campgrounds?	\$_____	\$_____
8b. Food, drink and refreshments?	\$_____	\$_____
8c. <u>Public</u> transportation, including airplane, train, bus and car rental?	\$_____	\$_____
8d. Rental of boat, fishing or camping equipment?	\$_____	\$_____
8e. Parking, access and boat launching fees?	\$_____	\$_____
8f. Bait and ice?	\$_____	\$_____

ASK Q8g ONLY IF INTERCEPT MODE WAS PRIVATE/RENTAL BOAT:

8g. Boat fuel?	\$_____	\$_____
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ASK Q8h ONLY IF INTERCEPT MODE WAS PARTY/CHARTER BOAT:

8h. Passenger fees, tips, filleting/smoking/canning?	\$_____	\$_____
--	---------	---------

ASK Q8i ONLY IF RESPONDENT UNABLE TO ITEMIZE:

8i. Total	\$_____	\$_____
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FOR Q8a-Q8i, DON’T KNOW=99998 and REFUSED=99999 SHOULD BE INCLUDED AMONG CODING OPTIONS.

IF RESPONDENT REPORTS POSITIVE EXPENDITURES IN Q8, GOTO Q9.
OTHERWISE SKIP TO Q10.

IF COUNTY OF INTERCEPT=COUNTY OF RESIDENCE, SKIP TO Q10.

IF COUNTY OF INTERCEPT AND COUNTY OF RESIDENCE ARE IN DIFFERENT STATES, ASK Q9a, Q9b AND Q9c.

12. What is your personal annual income before taxes? (**INTERVIEWER SHOULD BEGIN BY ASKING IF RESPONDENT'S INCOME FALLS INTO CATEGORY 3, THEN PROGRESSIVELY WORK WAY TOWARD LOWER/HIGHER INCOME CATEGORIES IF INCOME IS LESS/GREATER THAN PREVIOUS CATEGORY ASKED.**)

Less than \$15,600	1
\$15,600-\$31,199	2
\$31,200-\$46,799	3
\$46,800-\$62,399	4
\$62,400-\$77,999	5
\$78,000-\$93,599	6
\$93,600-\$109,199	7
\$109,200-\$123,799	8
\$124,800-\$139,999	9
Greater than \$140,000	10
Don't know	98
Refused	99

13. What type of saltwater fishing license did you have on [DATE OF INTERCEPT]? (**CHECK ONE.**)

IF STATE OF INTERCEPT=CA:

Annual resident	1
One-day resident	2
Two-day resident	3
Annual non-resident	4
Two-day non-resident	5
Ten-day non-resident	6

IF STATE OF INTERCEPT=OR:

Annual resident	7
One-day resident	8
Annual non-resident	9
One-day non-resident	10
Seven-day non-resident	11

IF STATE OF INTERCEPT=WA:

Annual resident	12
Two-day resident	13
Annual non-resident	14
Two-day non-resident	15

Other (please specify) _____
 Don't know 98
 Refused 99

ANNUAL FISHING EQUIPMENT EXPENDITURES

Now I'm going to ask about saltwater recreational fishing equipment that you may have bought over the past 12 months.

14. Over the past 12 months, how much did you spend on the following items for yourself and others:

14a. Rods, poles, reels and components for rod making? \$ _____
 14b. Tackle (lures, hooks, leaders, sinkers, flies and fly-tying supplies, line, etc.)? \$ _____
 14c. Gear (tackle boxes, nets, bait containers, nets, knives, spears, etc.)? \$ _____
 14d. Total (ASK ONLY IF RESPONDENT UNABLE TO ITEMIZE) \$ _____

FOR Q14a-Q14d, DON'T KNOW=99998 and REFUSED=99999 SHOULD BE INCLUDED AMONG CODING OPTIONS.

IF RESPONDENT DOES NOT REPORT POSITIVE EXPENDITURES IN Q14, SKIP TO Q16.

15. What percentage of the fishing equipment expenses that you just described were made:

15a. In [COUNTY OF RESIDENCE]? **ENTER % (>=0,<=100)**
 Don't know 998
 Refused 999

IF Q15a RESPONSE =100, 998 OR 999, SKIP TO Q16.

15b. Outside [COUNTY OF RESIDENCE]
 but in [STATE OF RESIDENCE]? **ENTER % (<=100-Q15a RESPONSE)**
 Don't know 998
 Refused 999

IF (Q15a RESPONSE + Q15b RESPONSE = 100) OR (Q15b RESPONSE EQ 998 OR 999), SKIP TO Q16.

15c. Outside [STATE OF RESIDENCE]? **ENTER % (=100-Q15a RESPONSE-Q15b RESPONSE)**
 Don't know 998

Refused 999

BOAT OWNERSHIP AND ANNUAL BOAT-RELATED EXPENDITURES

16. Do you or anyone in your household own a boat that is ever used for saltwater recreational fishing? **(IF RESPONDENT OWNS MORE THAN ONE BOAT USED FOR SALTWATER RECREATIONAL FISHING, ASK ABOUT THE PRIMARY BOAT.)**

Yes	1	
No	2	SKIP TO Q21.
Don't know	8	SKIP TO Q21.
Refused	9	SKIP TO Q21.

17. Over the past 12 months, about what percentage of the boat's use was for saltwater recreational fishing?

ENTER PERCENTAGE (≥ 0 , ≤ 100)

Don't know	998
Refused	999

IF Q17 RESPONSE=0, 998 OR 999, SKIP TO Q21.

18. How long is the boat?

ENTER BOAT LENGTH (# FEET)

Don't know	998
Refused	999

Now I'm going to ask about any boat-related expenses that you may have incurred over the past 12 months.

19. Over the past 12 months, how much did you personally spend on

19a. Purchase or loan payments for boat and boat accessories bought with the boat?	\$_____
19b. Purchase or loan payments for boat accessories (new hull, motor, trailer/hitch, electronic devices, etc.) bought separately from the boat?	\$_____
19c. Mooring, storage, maintenance, insurance, license and registration for boat and boat accessories?	\$_____
19d. Total (ASK ONLY IF RESPONDENT UNABLE TO ITEMIZE)	\$_____

FOR Q19a-Q19d, DON'T KNOW=99998 and REFUSED=99999 SHOULD BE

INCLUDED AMONG CODING OPTIONS.**IF RESPONDENT DOES NOT REPORT POSITIVE EXPENDITURES IN Q19, SKIP TO Q21.**

20. What percentage of the annual boat-related expenses that you just described were made:

- 20a. In [COUNTY OF RESIDENCE]? **ENTER % ($\geq 0, \leq 100$)**
 Don't know 998
 Refused 999

IF Q20a RESPONSE =100, 998 OR 999, SKIP TO Q21.

- 20b. Outside [COUNTY OF RESIDENCE]
 but in [STATE OF RESIDENCE]? **ENTER % ($\leq 100 - \text{Q20a RESPONSE}$)**
 Don't know 998
 Refused 999

IF (Q20a RESPONSE + Q20b RESPONSE = 100) OR (Q20b RESPONSE EQ 998 OR 999), SKIP TO Q21.

- 20c. Outside [STATE OF RESIDENCE]? **ENTER % ($= 100 - \text{Q20a RESPONSE} - \text{Q20b RESPONSE}$)**
 Don't know 998
 Refused 999

ANNUAL EXPENDITURES ON OTHER ITEMS

Now I'm going to ask about other miscellaneous expenses you may have incurred over the past 12 months primarily for saltwater recreational fishing (**IF RESPONDENT ASKS, "PRIMARILY" MEANS THAT MORE THAN 50% OF THE ITEM'S USE IS FOR SALTWATER RECREATIONAL FISHING**).

21. Over the past 12 months, how much did you spend for yourself and others for:

- 21a. Camping equipment used primarily for saltwater recreational fishing
 (sleeping bags, packs, tents, etc.)? \$ _____
- 21b. Binoculars, field glasses, etc. used primarily for saltwater recreational
 fishing? \$ _____
- 21c. Special saltwater fishing clothing (foul weather gear, boots, waders,
 masks, wetsuits, etc.)? \$ _____
- 21d. Magazine, newspaper and electronic subscriptions devoted to
 saltwater recreational fishing? \$ _____

- 21e. Dues or contributions to national, state or local recreational fishing clubs or organizations? \$_____
- 21f. Total (ASK ONLY IF RESPONDENT UNABLE TO ITEMIZE) \$_____

FOR Q21a-Q21f, DON'T KNOW=99998 and REFUSED=99999 SHOULD BE INCLUDED AMONG CODING OPTIONS.

IF RESPONDENT DOES NOT REPORT POSITIVE EXPENDITURES IN Q21, SKIP TO Q23.

22. What percentage of the miscellaneous expenses that you just described were made:

- 22a. In [COUNTY OF RESIDENCE]? **ENTER % ($\geq 0, \leq 100$)**
 Don't know 998
 Refused 999

IF Q22a RESPONSE =100, 998 OR 999, SKIP TO Q23.

- 22b. Outside [COUNTY OF RESIDENCE]
 but in [STATE OF RESIDENCE]? **ENTER % (≤ 100 -Q22a RESPONSE)**
 Don't know 998
 Refused 999

IF (Q22a RESPONSE + Q22b RESPONSE = 100) OR (Q22b RESPONSE EQ 998 OR 999), SKIP TO Q23.

- 22c. Outside [STATE OF RESIDENCE]? **ENTER % ($= 100$ -Q22a RESPONSE-Q22b RESPONSE)**
 Don't know 998
 Refused 999

**COST OF VEHICLES AND VACATION HOMES USED PRIMARILY FOR
 SALTWATER RECREATIONAL FISHING**

Now I'm going to ask about purchases you may have made over the past 12 months for vehicles or vacation homes that you use primarily for saltwater recreational fishing (IF RESPONDENT ASKS, "PRIMARILY" MEANS THAT MORE THAN 50% OF THE ITEMS' USE IS FOR SALTWATER RECREATIONAL FISHING).

23. Over the past 12 months, how much did you personally spend for:

- 23a. Purchase or loan payments for vehicles used primarily for saltwater recreational fishing (pickup, camper, RV, motor home, etc.)? \$_____

- 23b. Insurance, repair and maintenance for vehicles used primarily for saltwater recreational fishing (pickup, camper, RV, motor home, etc.)? \$_____
- 23c. Purchase or loan payments for cabin or second home used primarily for saltwater recreational fishing? \$_____
- 23d. Insurance, repair and maintenance for cabin or second home used primarily for saltwater recreational fishing? \$_____
- 23e. Total (**ASK ONLY IF RESPONDENT UNABLE TO ITEMIZE**) \$_____

FOR Q23a-Q23e, DON'T KNOW=99998 and REFUSED=99999 SHOULD BE INCLUDED AMONG CODING OPTIONS.

IF RESPONDENT DOES NOT REPORT POSITIVE EXPENDITURES IN Q23, SKIP TO Q25.

24. What percentage of the vehicle and housing expenses that you just described were made:

- 24a. In [COUNTY OF RESIDENCE]? **ENTER % ($\geq 0, \leq 100$)**
 Don't know 998
 Refused 999

IF Q24a RESPONSE =100, 998 OR 999, SKIP TO Q25.

- 24b. Outside [COUNTY OF RESIDENCE] but in [STATE OF RESIDENCE]? **ENTER % (≤ 100 -Q24a RESPONSE)**
 Don't know 998
 Refused 999

IF (Q24a RESPONSE + Q24b RESPONSE = 100) OR (Q24b RESPONSE EQ 998 OR 999), SKIP TO Q25.

- 24c. Outside [STATE OF RESIDENCE]? **ENTER % ($= 100$ -Q24a RESPONSE-Q24b RESPONSE)**
 Don't know 998
 Refused 999

EXPENDITURE SHIFT PATTERNS

The next question is to determine how you would spend your money if you were to stop making saltwater recreational fishing trips in [COUNTY OF INTERCEPT].

25. Suppose that you decided—for whatever reason—to stop spending money for saltwater

recreational fishing in [COUNTY OF INTERCEPT]. Suppose you were considering whether to instead spend that money on saltwater recreational fishing outside of [COUNTY OF INTERCEPT], on freshwater fishing or on something unrelated to fishing.

25a. What percentage of the money that you currently spend on saltwater recreational fishing in [COUNTY OF INTERCEPT] would you spend instead on saltwater recreational fishing outside of [COUNTY OF INTERCEPT]?

ENTER % (≥ 0 , ≤ 100) → Most likely county/state/country? _____
 Don't know 998 Don't know 98
 Refused 999 Refused 99

IF Q25a RESPONSE =100, 998 OR 999, SKIP TO Q26.

25b. What percent would you spend on freshwater recreational fishing?

ENTER % (≤ 100 -Q25a RESPONSE) → Most likely county/state/country? _____
 Don't know 998 Don't know 98
 Refused 999 Refused 99

IF (Q25a RESPONSE + Q25b RESPONSE = 100) OR (Q25b RESPONSE EQ 998 OR 999), SKIP TO Q26.

25c. What percent would you spend on something other than fishing?

ENTER % ($=100$ -Q25a RESPONSE-Q25b RESPONSE) → Most likely county/
 state/country? _____
 Don't know 998 Don't know 98
 Refused 999 Refused 99

DEMOGRAPHIC INFORMATION

These final questions are for statistical purposes, to help us be sure we've spoken with a random sample of anglers.

26. How many years of saltwater recreational fishing experience do you have?

ENTER NUMBER OF YEARS

Don't know 98
 Refused 99

27. What is your household's annual income before taxes? **(INTERVIEWER SHOULD BEGIN BY ASKING IF RESPONDENT'S INCOME FALLS INTO CATEGORY 3,**

THEN PROGRESSIVELY WORK WAY TOWARD LOWER/HIGHER INCOME CATEGORIES IF INCOME IS LESS/GREATER THAN PREVIOUS CATEGORY ASKED.)

Less than \$15,600	1
\$15,600-\$31,199	2
\$31,200-\$46,799	3
\$46,800-\$62,399	4
\$62,400-\$77,999	5
\$78,000-\$93,599	6
\$93,600-\$109,199	7
\$109,200-\$123,799	8
\$124,800-\$139,999	9
Greater than \$140,000	10
Don't know	98
Refused	99

Thank you for taking the time to participate in this survey.

RECORD DATE OF TELEPHONE FOLLOW-UP INTERVIEW.

Appendix 3:

Random Digit Dial Household Add-on Survey Instrument

Pacific Coast-- Supplemental Economic Add-on Questionnaire
Dated: February 2, 2000

Section 1

For 1st non-refusing 2-month angler with in-state and/or out-of-state trips
 Section 1 questions shall be asked for the first day of fishing discussed by the angler regardless of in-state or out-of-state trip (provided state of residence and state of trip completion can be determined). They shall be asked after the trip loop questions in the base MRFSS survey for one mode (see following priority list) of fishing on the first day discussed, based on the following mode priority: (1) party/charter; (2) private/rental boat; and (3) shore.

These questions will be asked regardless of whether state and county of trip is known.

Age:

Are you at least 16 years of age?

1 Yes

2 No/DK/R

{Ask the following questions if age=1; if age=0, skip these questions}

Q2: On your most recent day of fishing, were you fishing for any particular kind of fish?

01 No particular species/fishing for anything

02 Display species list - refer to attached

98 Don't Know

99 Refused

Q2_A: Record second species targeted. Do not prompt for species.

Section 2

The following questions will come after all of the trip loop questions are asked, before transferring to the next fisher/terminating the call.

If state and county of trip is not known, skip to Q9

Q3:For this next set of questions, please think back to the first fishing trip you told me about, which was {restore month and day}. Was that day of fishing part of an overnight stay away from home?

[Interviewer- One-day fishing trips involving departure of a boat from port on the night before fishing occurred should not be considered an "overnight stay away from home" unless the angler spent additional nights away from home.]

1 Yes

2 No

8 DK

9 Refused

{If No, DK or Refused, respondents will skip to Q5}

Q4:How many nights were you away from home on that trip?

Appendix 3

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}.]

1 record response {range is 1 to 365}
998 DK
999 Refused

Q5: Including yourself, how many people traveled together on that trip?

1 record response {if Q5=1, set indiv=1} {range is 1 to 50}
98 Don't Know
99 Refused
{if response =1, respondents will skip to Q7, }

Q6: Including yourself, how many of the [display Q5 response] people who traveled together actually fished during the trip?

1 record response {range is <= Q5 response} {if Q6 response=1, set indiv=1}
98 Don't Know
99 Refused

Q7: {If indiv=1 this question will be displayed as:

Now I'd like to ask you about the amount of money that you spent for your entire trip away from home, not just the time spent fishing, in each of the following categories:

{If indiv=0 this question will be displayed as:

Now I'd like to ask you about the amount of money spent for the entire trip away from home, not just the time spent fishing. For each expenditure category that I mention, please estimate either your own personal expenses or the expenses for your entire group, whichever is easier for you to remember. If you prefer to report your personal expenses, please include your expenses only, regardless of who paid them, and please don't include expenses that you might have paid for anyone else on that trip.

{If Q3 response is 2,8, 9, indicating no overnight trip or dk/ref, respondents will skip to Q7B}

Q7A: On your most recent trip how much was spent for:

Lodging at motels, cabins, lodges, or campgrounds?

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}.

Please be sure to include lodging expenses incurred during the entire trip away from home including time spent traveling, fishing or engaging in non-fishing activity.

1 zero/nothing {skip to Q7B}
2 record amount spent {range is 1 to 9999}
99998 DK {skip to Q7B}
99999 R {skip to Q7B}

{This question will be asked if indiv=0}

Q7A_BY: And was that your individual expense or the group's expenses?

1 Individual

2 Group

Q7B:On your most recent trip how much was spent for:

Food, drink and refreshments?

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}. Please be sure to include expenses incurred during the entire trip away from home, including time spent traveling, fishing or engaging in non-fishing activity.]

1 zero/nothing {skip to Q7C}

2 record amount spent

{range is 1 to 999}

99998 DK {skip to Q7C}

99999 R {skip to Q7C}

{This question will be asked if indiv=0}

Q7B_BY:

And was that your individual expense or the group's expenses?

1 Individual

2 Group

Q7C:On your most recent trip how much was spent for:

Bait and ice?

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}. Please be sure to include expenses incurred for all the fishing done during the entire trip away from home.]

1 zero/nothing {skip to Q7D}

2 record amount spent

{range is 1 to 999}

99998 DK {skip to Q7D}

99999 R {skip to Q7D}

{This question will be asked if indiv=0}

Q7C_BY:And was that your individual expense or the group's expenses?

1 Individual

2 Group

{If mode is not private/rental, respondents will skip to Q7E}

Q7D:On your most recent trip how much was spent for:

Boat fuel used on the trip? (Please estimate the dollar amount of fuel you consumed on the trip, not just the amount you purchased.)

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}. Please be sure to include expenses incurred during the entire trip away from home, including time spent in non-fishing as well as fishing activity.]

1 zero/nothing {skip to Q7E}

2 record amount spent

{range is 1 to 999}

99998 DK {skip to Q7E}

Appendix 3

99999 R {skip to Q7E}

{This question will be asked if indiv=0}

Q7D_BY: And was that your individual expense or the group's expenses?

1 Individual

2 Group

{If mode is not party/charter, respondents will skip to Q7F}

Q7E: On your most recent trip how much was spent for:

Passenger fees, tips, filleting/smoking/canning?

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}. Please be sure to include expenses incurred for all the fishing done during the entire trip away from home.]

1 zero/nothing {skip to Q7F}

2 record amount spent {range is 1 to 999}

99998 DK {skip to Q7F}

99999 R {skip to Q7F}

{This question will be asked if indiv=0}

Q7E_BY: And was that your individual expense or the group's expenses?

1 Individual

2 Group

{This question will be asked if Q7A through Q7E are all don't know or refused}

Q7F: Could you estimate the **total** amount that was spent for the trip?

[Interviewer - as needed: Remember, we're talking about the first fishing trip you told me about, which was on {restore month and day}. Please be sure to include expenses incurred during the entire trip away from home, including time spent traveling, fishing or engaging in non-fishing activity.]

1 zero/nothing {skip to Q8}

2 Record Amount {Range 1 to 99995}

99998 DK {skip to Q8}

99999 R {skip to Q8}

{This question will be asked if indiv=0}

Q7F_BY: And was that your individual expense or the group's expenses?

1 Individual

2 Group

{If Q7A+Q7B+Q7C+Q7D+Q7E+Q7F sum to 0, respondents will skip to Q9}

Q8: What percentage of the total trip expenses that you just described were made in {restore county of trip}?

[INTERVIEWER: Obtain the percent of expenditures made in {restore county of trip}].

1 record % {range is 0 to 100}

998 DK

999 R

{If Q8 =100,998,999, respondents will skip to Q9}

Q8B: What percentage of the total trip expenses that you just described were made outside {restore county of trip} but in {restore state of trip}?

1 record %

{range is <=100-Q8 response}

998 DK

999 R

Q9 Now, I'm going to ask about saltwater recreational fishing equipment that you may have bought over the past 12 months.

Q9A: Over the last 12 months, how much did you spend on the following items for yourself and others?

Rods, poles, reels, and components for rod making?

[Prompt as needed: To the nearest dollar, what is the value of these items that you bought during the last 12 months.]

1 record response

{range is 0 to 9999}

99998 DK

99999 R

Q9B: Tackle (lures, hooks, leaders, sinkers, flies, fly-tying supplies, line, etc)?

[Prompt as needed: To the nearest dollar, what is the value of these items that you bought during the last 12 months.]

1 record response

{range is 0 to 9999}

99998 DK

99999 R

{This question will be asked if Q9A and Q9B are both don't know or refused}

Q9C. Could you estimate the **total** amount that was spent on these items?

[Prompt as needed: To the nearest dollar, what is the value of these items that you bought during the last 12 months.]

1 record response

{range is 0 to 99995}

99998 DK

99999 R

{If Q9A+Q9B+Q9C sum to zero, respondents will skip to Q11}

Q10 What percentage of the annual expenses that you just described were made in {restore county of residence}?

[Items include: Rods, poles, reels, components for rod making, and tackle (lures, hooks, leaders, sinkers, flies, fly tying supplies, line)?

1 record %

{range is 0 to 100}

998 DK

999 R

Q10=100, 998, or 999, respondents will skip to Q11}

Appendix 3

Q10B: What percentage of the annual expenses that you just described were made outside {restore county of residence} but in {restore state of residence}?

[Items include: Rods, poles, reels, components for rod making, and tackle (lures, hooks, leaders, sinkers, flies, fly tying supplies, line)?]

1 record % {range is $\leq 100 - Q10$ }

998 DK

999 R

Q11: Do you personally own a boat that was used for saltwater recreational fishing over the past 12 months?

[Interviewer: If the respondent owns more than one boat that is used for saltwater fishing, ask about the boat that is used the most.]

1 Yes

2 No

8 DK

9 R

{If Q11 = 2, 8, or 9, respondents will skip to Q14}

Q12: Over the past 12 months, how much did you personally spend on mooring, storage, maintenance, insurance, license and registration for the boat and on boat accessories (electronic devices, trailer hitch, etc.)?

1 record amount spent {Range 0 to 99995}

99998 DK

99999 R

{This question will be asked if Q12 response is a positive value}

Q13: What percentage of the boat expenses that you just described were made in {restore county of residence}?

1 record % {range is 0 to 100}

998 DK

999 R

{If Q13=100, 998 or 999, respondents will skip to Q14}

Q13B: What percentage of the boat expenses that you just described were made outside {restore county of residence} but in {restore state of residence}?

1 record % {range is $\leq 100 - Q13$ }

998 DK

999 R

Q14: Now I'm going to ask about other miscellaneous expenses you may have incurred over the past 12 months primarily for saltwater recreational fishing.

[Interviewer : If respondent asks, "primarily" means that more than 50% of the item's use is for

saltwater recreational fishing.]

Q14A: Over the past 12 months, how much did you spend for yourself and others for:
 Special saltwater fishing clothing (foul weather gear, boots, waders, masks, wetsuit, etc.)?
 1 record amount {Range 0 to 999}
 99998 DK
 99999 R

Q14B: Over the past 12 months, how much did you spend for yourself and others for:
 Magazine, newspaper and electronic subscriptions devoted to saltwater recreational fishing?
 1 record amount {Range 0 to 999}
 99998 DK
 99999 R

Q14C: Over the past 12 months, how much did you spend for yourself and others for:
 Dues or contributions to national, state or local recreational fishing clubs or organizations?
 1 record amount {Range 0 to 999}
 99998 DK
 99999 R

{This question will be asked if Q14A through Q14C are all don't know or refused}

Q14D. Could you estimate the **total** amount that you spent on these items over the past 12 months for yourself and others?
 1 record response {range is 0 to 99995}
 99998 DK
 99999 R

{If Q14A, Q14B, Q14C, Q14D sum to zero, respondents will skip to the end}

Q15: What percentage of the annual miscellaneous expenses that you just described were made in {restore county of residence}?
 1 record % {range is 0 to 100}
 998 DK
 999 R

{If Q15=100, 998 or 999, respondents will skip to the end}

Q15B: What percentage of the annual miscellaneous expenses that you just described were made in {restore county of residence} but in {restore state of residence}?
 1 record % {range is <=100-Q15}
 998 DK
 999 R

